REMARKS

Applicant respectfully requests reconsideration and withdrawal of the rejections set forth in the Office Action dated April 27, 2005. At the time the Examiner issued the Office Action claims 1, 3-9, and 29-34 were pending. By this amendment, claims 1 and 7 have been amended to solely correct an informality. Claims 1, 3-9, and 29-34 remain pending.

In the Office Action, the Examiner objected to claim 1 because of an informality with respect to the term "sections." Claims 1 and 7 have been amended to correct the informaltiy. No substantive amendments have been made to the claims.

In the Office Action, the Examiner rejected claims 1, 3, 9, and 29-34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,535,844 ("Glaros"). MPEP § 2143.03 states that "to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988)." Applicant respectfully submits that the single-cited reference (i.e., Glaros) can not support a *prima facie* case of obviousness.

Independent Claims 1 and 7 are directed to a structural-load-bearing building component that has front and back side portions, joinery portions integral to the front and back side portion and connected to form a substantially symmetrical joinery member. An insulating core is in the interior area, and a shear resistance connector projects from the front or back side portions into the insulating core. The shear resistance connector has a substantially rectangular cross-sectional shape and is substantially affixed to the insulating core. The front and back side portions, the joinery portions, the insulating core, and the shear resistance connector are "interconnected to form a load bearing component having . . . a strength-to-weight ratio equal to or greater than 33 to 1." Application respectufly

submits that Glaros does not teach or suggest such a structural load bearing building component as claimed in the present application.

Glaros is directed to a composite panel having inner and outer skins interconnected so as to form asymmetrical side edges. More specifically, the first side edge is bent to form a groove-like recess spaced from the outer face and extending the length of the panels. The second side edge is bent to form a tongue spaced from the outer face and adapted to fit within the groove-like recess of the first edge of an adjacent panel. Column 1, line 69-column 2, line 2. As shown in Figures 1-3 of Glaros, this edge configuration defines an asymmetrical joinery. The edge portions of the panel of Glaros do not provide joinery portions integral to front and back side portions wherein the first and second joinery portions are connected "to form a substantially symmetrical joinery member at the edge of a panel." Glaros does not teach or suggest the first and second joinery portions as claimed. Therefore, Glaros does not teach or suggest all of the claim limitations in the claims.

Glaros also teaches a panel wherein "two panel forming members 10 and 11 are spaced apart by a foamed in situ urethane foam insulant 12. The two panel forming members 10 and 11 have outer faces of different configurations, that of 10 being perfectly flat and planar, while that of 11 is generally planar, but has a central valley or trough portion 14 for decorative as well as utilitarian drainage effect." (emphasis added). Glaros, column 2, lines 38-46. Accordingly, the trough 14 shown in the Figures is a decorative or drainage trough. The decorative or drainage trough 14 of Glaros is not disclosed, suggested, or intended to be a "sheer resistance connector having a substantially rectangular cross-sectional shape being substantially rigidly affixed to the insulating core." The only teaching of such a structural component of a panel is provided in the present application. Any modification to the decorative or drainage trough of Glaros to provide the shear resistance connector would be obvious only after understanding the present invention and applying impermissible hindsight analysis.

The Examiner is correct in her reading of Glaros regarding its failure to teach a load-bearing component having a strength-to-weight ratio equal to or greater than 33 to 1. The Examiner, however, asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the strength-to-width ratio suitable for the use intended as an obvious matter of design choice. The Examiner goes on to assert that "a larger panel made from aluminum may require a higher or larger strength-to-weight ratio; whereas, a smaller panel made from steel might require a smaller strength-to-weight ratio. (Office Action at page 3). Applicant respectfully traverses this assertion.

The Examiner implies that the panel of Glaros will have the same use intended as the structural load bearing building component of the present invention. The Examiner's assumption is not supported by the teaching of Glaros Glaros is silent regarding any strength-to-weight ratio or other applications of the panel that would require an elevated strength-to-weight ratio of 33 to 1 or greater. In fact, as Applicant understands the reference, Glaros is silent as to the material that is used to form the outer skins or any strength requirements of the skin material. Accordingly, the Examiner is only guessing at what may be the materials and a suitable strength-to-weight ratio of the panel disclosed in Glaros. Further, Glaros teaches the composite panel with a foam core and does not disclose, teach or suggest a shear resistance connector and associated panel configuration as claimed that provides a high strength-to-weight ratio so as to be suitable as a structural load-bearing component set forth in the present invention. To overcome this deficiency in Glaros, the Examiner only makes the unsupported assertion that the strength-to-width ratio would have been an obvious matter of design choice, but provides no supporting evidence.

MPEP § 2144.03 states:

> "It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 ("[T]he Board cannot simply reach conclusions based on its own understanding or experience-or on its assessment of what would be basic

> knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). As the court held in *Zurko*, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support. *Id.* at 1385, 59 USPQ2d at 1697. See also *In re Lee*, 277 F.3d 1338, 1344-45, 61 USPQ2d 1430, 1434-35 (Fed. Cir. 2002)

The Examiner has provided no evidentiary support in the record to support the assertion that the combination of structures as specifically recited to provide the strength-to-weight ratio equal to or greater than 33 to 1 is merely a design choice. In fact, Glaros specifically teaches a panel with a groove or trough for aesthetic reasons or drainage reasons. Glaros does not discuss or suggest providing in combination the front and back side portions, the joinery, or insulating core and a shear resistance connector interconnected to provide a structure having a large strength-to-weight ratio, namely 33 to 1 or greater. The Examiner's hypothetical with respect to larger versus smaller panels made from different materials is also unsupported and is apparently only based upon the Examiner's understanding, but not supported by concrete evidence in the record. Therefore, Glaros can not support the Examiner's rejection under Section 103. If the Examiner elects to maintain these rejections, Applicant respectfully requests the Examiner provide a cite to the holding which forms the basis of the rejections.

Regarding dependent claims 3-6, 8, 9, and 29-34, applicant respectfully submits for the above reasons and the features in the claims, that these dependent claims are also patentable over Glaros. With respect to claim 3, the Examiner states that "in reference to claim 3, the panels are positioned with respect to a force; wherein the panels are positioned as wall or roof members that are capable of being subject to wind forces, snow weight, and vibrations from aircraft or earth movement." Applicant has carefully reviewed Glaros and finds no reference whatsoever to panels being positioned as wall or roof members that are capable of being subject to wind forces, snow weight, and vibrations from aircraft or earth movement as asserted by the Examiner. Applicant requests that the Examiner more specifically point out where such a teaching is provided in Glaros. Otherwise, applicant respectfully requests withdrawal of the rejection of dependent claim 3.

Regarding the rejection of the dependent claims, applicant disagrees with the Examiner's assertion as to what would have been an obvious design choice, in particular in view of the above discussion. The Examiner's assertions of design choice are not supported by evidence in the record.

In view of the foregoing, the claims pending in the application comply with the requirements of 35 U.S.C. § 112 and patentably define over the applied art. A notice of allowance is, therefore, respectfully requested. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at 206-359-3259.

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Respectfully submitted,

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